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THE USE IN COUNSELING AND RESEARCH OF A COMPUTER PROGRAM WHICH GIVES AN ITEM ANALYSIS OF THE EDWARDS PERSONAL PREFERENCE SCHEDULE.

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The program briefly described in this paper represents an attempt to have the computer provide the counselor with a descriptive, item interpretation of the Edwards Personal Preference Schedule (EPPS). The rationale of the item analysis approach to a descriptive interpretation is that each of the 135 statements (nine for each of the 15 EPPS scales) is a scale in and of itself, and that the frequency of selection of statements determines whether or not each statement is descriptive of the individual. The mechanics of scoring and evaluating the results is done by the computer. The computer scores each of the Edwards scales and each of the 135 statement scales. It then evaluates each of the 135 statements scores, printing a brief sentence based upon the actual wording of the statement in the test if the client responded each time a statement was present. The series of descriptive statements which the client has indicated as characteristic or not characteristic of himself plus test score results from the descriptive output used for a counseling interview. A test-retest after several weeks on a small sample showed high reliability for extreme scores. (PS)

The Use in Counseling and Research of A Computer Program Which Gives an Item Analysis of The Edwards Personal Preference Schedule *

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Data processing equipment, especially the computer, is being used in increased number by psychologists interested in test theory and development. The development of sophisticated computer hardware has led psychologists to write complex computer programs which direct the computer to not only score the test, but also interpret the results based upon information known about the test and stored within the computer. Programmers have typically employed two different approaches using data processing equipment to interpret test results. The first approach, which is the most common, depends upon profile similarity. The computer searches for similar profile patterns stored within the memory of the computer, and once finding a similar pattern, prints out the interpretation associated with that pattern. Two examples of this type of program interpretation are the MMPI computer interpretation recently offered by the Psychological Corporation, and the Personality Assessment System interpretation. A second approach to interpretation is descriptive in nature and based upon an item analysis of the test. With this type of program the computer simply takes the data provided by the client,

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organizes it, and prints it out in a descriptive manner. The program which is briefly described in this paper represents an attempt to have the computer provide the counselor with the second type of interpretation, a descriptive, item interpretation of the Edwards Personal Preference Schedule.

The Edwards Personal Preference Schedule consists of two hundred and twenty-five items. Each item is made up of two descriptive statements, one of which the client must choose as being characteristic of what he likes or feels. One hundred and thirty-five such statements, nine for each of Edwards fifteen scales, appear three or four times within the test.

Three assumptions about the nature of the Edwards have been made. First, it is assumed that each of the 135 statements is unique and descriptive, and is, therefore, important to the client. The forced-choice foremat of the instrument approximates situations in life where one must choose one behavioral response over another. The choice of one statement over another, therefore, represents a true distinction in the client's self-evaluation. And thirdly, it is assumed that the selection of the statement all of the three or four times it is paired with three or four other statements indicates that that statement is strongly preferred, and, therefore, descriptive of the client. The converse is assumed also; that statements which were not selected any of the three or four times that they appear within the test are

strongly not preferred, and therefore, descriptive negatively of the client.

The rationale of the item analysis approach to a descriptive interpretation of the Edwards, then, is simply that each of the hundred and thirty-five statements is a scale in and of itself, and that the frequency of selection of statements determines whether or not each statement is descriptive of the individual. The mechanics of scoring and evaluating the results is done by the computer. First the computer serves a scoring function, scoring each of the Edwards scales, then each of the 135 statements scales. Secondly the computer evaluates each of the 135 statements scores, and if the score indicates that the client responded every time a statement was present, the computer prints a brief sentence based upon the actual wording of the statement found in the test. The same procedure is repeated by the computer except that a frequency of zero signals printing of the sentence. Thus, the computer provides the counselor with a series of descriptive statements which the client has indicated as being characteristic or not characteristic of himself. Appendix A gives an example of this type of output provided by the program.

Interpretation of the test in a counseling situation is straightforward with both the counselor and client participating. Typically, the counselor proceeds as the Edwards manual suggests by giving an interpretation of the 15 scales. The interpretation of the descriptive statements follows a short introduction

describing the statements and how they were selected. Special note is made by the counselor of the difference between characteristic and not characteristic statements. The client is asked to read all of the printed statements and respond to them. To facilitate locating the Edwards scale to which the statement belongs, each is numbered according to the Edwards scale (i.e. tens to achievement, twenties to deference, and so forth). After responding to the characteristic and not characteristic statements, the counselor and client then explore possible intra scale conflicts. These occur when the client selects some statements within a scale and rejects one or more within that same scale. In the example given in Appendix A, four of the Edwards scales are at or above one standard deviation, and four are below one standard deviation. An evaluation of the statements chosen or not chosen reveal, however, that three of the scales have one or more statements printed in the opposite direction. This suggests that these Edwards scales must be interpreted with caution. Conflicting statements which come from different Edwards scales can also be evaluated. An example of this type of conflict is found in the print-out given in Appendix A. This client indicated that although he gives in rather than have his own way, he argues for his point of view. One can see that other similar conflicting statements have also been made by this client. Another feature of this type of evaluation is that the statements which were preferred or not preferred by the client, but which are associated

with Edwards scales which fall between plus and minus one standard deviation, are printed. This permits the counselor and client to explore relative strengths of Edwards need scales.

Experience using this type of output with clients has demonstrated its effectiveness. Clients not only find it easy to involve themselves in the interpretation process, but also are more amiable to acceptance of the results. By having this information before the client, and in some resemblance of organization, clients not infrequently find it very easy to talk about how their needs and preferences influence their daily lives. Such explorations by clients aid readliy in the decision making process, whether the decision relates to vocational plans, educational plans or personal adjustment.

Since the selection of the statements is a function of extreme scores, it has frequently been asked; how reliable are the selections? A test-retest after two to six weeks on a small sample has revealed that the extreme scores have a high reliability. None of the statements in any of the sample reversed their direction from characteristic to not characteristic, or not characteristic to characteristic on retest. Frequency rates, the percentage of subjects which scored at the extreme, ranged from zero to ninety-three per cent for the statements under both the characteristic and not characteristic criterion. Norming of a larger population is presently being planned which will provide frequency rates and test-retest reliability coefficients for college students by sex.

This program can be an aid in doing research with the Edwards. An added advantage to having the computer score the test is that the data can be easily stored on tape or on cards for future evaluation or research. The expansion of the test to 135 scales has provided counselors interested in researching the Edwards with a greater number of scales on which to evaluate external criteria. A study evaluating under-achievers on the 135 scales is presently planned. It is assumed in this study that under-achievers not only respond differently on the statements within the achievement scale, but also respond diferentially on some of the statement scales which relate to college success and motivation.

Decidedly, this paper has only given a brief sketch of the computer program and the descriptive output it provides. It is hoped, though, that it has demonstrated the capabilities of data processing equipment and how it aids in the effective and productive use of present and future psychological tests. Those who might be interested in further information about this program and the results may obtain such information by contacting me at the University of Missouri Testing and Counseling Service.

APPENDIX A

COMPUTER EVALUATION

OF

EDWARDS PERSONALITY PREFERENCE SCHEDULE

OF

[illegible] DOE JOHN S

STUDENT NUMBER 101C00000

DATE 110366

SCALE	RAW SCORE	TSCORE
1. ACH	17.	53.
2. DEF	9.	44.
3. ORD	16.	63.
4. EXH	18.	60.
5. AUT	17.	56.
6. AFF	9.	36.
7. INTRA	9.	36.
8. SUC	12.	53.
9. DOM	12.	39.
10. ABA	20.	66.
11. NUR	10.	42.
12. CNG	8.	34.
13. END	13.	51.
14. HET	21.	56.
15. AGG	18.	61.

ITEM INTERPRETATION

THE CLIENT HAS CHOSEN THE FOLLOWING STATEMENTS AS BEING MOST CHARACTERISTIC OF SELF

12 TRIES TO BE SUCCESSFUL
13 DESIRES TO ACCOMPLISH TASKS REQUIRING SKILL AND EFFORT
18 WANTS TO DO THINGS BETTER THAN OTHERS
21 GETS SUGGESTIONS FROM OTHERS
32 MAKES PLANS BEFORE BEGINNING A DIFFICULT TASK
35 TENDS TO MAKE PLANS WHEN MAKING A TRIP
41 LIKES TO SAY WITTY AND CLEVER THINGS
44 LIKES TO HAVE OTHERS NOTICE AND COMMENT UPON APPEARANCE
52 WANTS TO BE ABLE TO SAY WHAT HE THINKS ABOUT THINGS
57 OCCASIONALLY DOES THINGS WITHOUT REGARD TO WHAT OTHERS THINK
81 LIKES TO HAVE OTHERS PROVIDE HELP WHEN IN TROUBLE
91 LIKES TO ARGUE FOR POINT OF VIEW
93 WANTS TO BE REGARDED AS A LEADER
105 GIVES IN RATHER THAN HAVE OWN WAY
106 FEELS THE NEED FOR CONFESSION OF ERRORS

4	5	6	7	8	9	10	11
107	BECOMES DEPRESSED BY INABILITY TO HANDLE SITUATIONS						
111	LIKES TO HELP FRIENDS WHEN THEY ARE IN TROUBLE						
127	TRYS NEW AND DIFFERENT JOBS						
136	WILL STAY UP LATE AT NIGHT UNTIL TASK IS FINISHED						
142	TENDS TO ENGAGE IN SOCIAL ACTIVITIES						
143	HAS A NEED TO BE IN LOVE WITH A MEMBER OF THE OPPOSITE SEX						
144	LIKES TO KISS THOSE OF THE OPPOSITE SEX						
145	DESIRES TO BE PHYSICALLY ATTRACTIVE						
149	LIKES TO BE SEXUALLY EXCITED						
153	CRITICIZES OTHERS PUBLICALY						
155	TELLS PEOPLE OFF WHEN DISAGREEING WITH THEM						
156	TENDS TO GET REVENGE FOR INSULTS						
	THE CLIENT DID NOT CHOSE THE FOLLOWING STATEMENTS AS BEING MOST CHARACTERISTIC OF SELF						
19	WOULD LIKE TO WRITE A GREAT NOVEL OR PLAY						
22	LIKES TO FIND OUT WHAT OTHERS THINK						
23	CAN FOLLOW DIRECTIONS AND DO WHAT IS EXPECTED						
24	OCCASIONALLY PRAISES OTHERS						
27	ENJOYS READING ABOUT GREAT MEN						
31	HAS A NEED TO HAVE WORK NEAT AND ORGANIZED						
34	KEEPS THINGS NEAT AND ORDERLY						
55	DESIRES TO DO THINGS WHICH ARE UNCONVENTIONAL						
58	CRITICIZES THOSE IN POSITIONS OF AUTHORITY						
63	LIKES TO DO THINGS FOR OTHERS						
66	SHARES THINGS WITH FRIENDS						
73	DESIRES TO UNDERSTAND HOW OTHERS FEEL						
77	LIKES TO ANALYZE THE MOTIVES OF OTHERS						
89	NEEDS TO MAKE A FUSS OVER SELF WHEN HURT						
112	DESIRES TO ASSIST LESS FORTUNATES						
114	FORGIVES OTHERS EASILY						
115	LIKES TO DO SMALL FAVORS FOR OTHERS						
122	LIKES TO TRAVEL						
123	LIKES TO MEET NEW PEOPLE						
128	DESIRES TO MOVE AND LIVE IN DIFFERENT PLACES						
134	TENDS TO KEEP AT A PUZZLE OR PROBLEM UNTIL SOLVED						
138	STICKS AT A TASK EVEN THOUGH NO PROGRESS IS BEING MADE						
147	READS BOOKS AND PLAYS INVOLVING SEX						
4	5	6	7	8	9	10	11